

## Appendix A: Recruitment Materials

- Appendix A1 – Teaching Fractions Toolkit Evaluation Project Overview for District and School Leaders
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## Appendix A1- Teaching Fractions Toolkit Evaluation Project Overview for District and School Leaders

### Practice Guides

The U.S. Department of Education has supported the creation of professional development resources for teachers on a wide range of instructional topics. Known as practice guides, these practice guides are developed by teams of content experts and researchers who reviewed the available evidence and research studies, and each practice guide shares evidence-based recommendations related to the topic of that practice guide. The Teaching Fractions Toolkit will focus on the [Developing Effective Fractions Instruction for Kindergarten Through 8th Grade](#) practice guide.

### Regional Educational Laboratory Midwest (REL Midwest)

AIR was awarded the REL Midwest contract for January 2022 through January 2027, serving educators and policymakers across the Midwest. REL program staff collaborate with educators and policymakers nationwide in efforts to support decision making about education policies, programs, and practices with a focus on learner outcomes.

### Teaching Fractions Toolkit

REL Midwest is developing a toolkit with resources that supports the implementation of effective grade 6 fractions instruction based on the evidence-based recommendations in the [Developing Effective Fractions Instruction for Kindergarten Through 8th Grade](#) practice guide.

- The Toolkit includes resources for administrators and math leaders to understand all five recommendations from the practice guide and how to support teachers to implement those recommendations. Resources will include informational videos, infographics, checklists, and materials to support the facilitation of teacher professional development (PD) modules.
- The Toolkit includes resources for grade 6 math teachers to support their understanding and implementation of best practices in fraction instruction, including:

Six teacher PD modules: Six hours of synchronous and asynchronous activities per module including exploration of math tasks, student work analysis, lesson planning, use of formative assessment probes, and reflection on classroom practice.

Diagnostic and monitoring resources for teachers such as a lesson reflection tool for use in planning lessons and reflecting on lessons and formative assessment probes for use with students.

### Evaluation overview

REL Midwest is conducting an evaluation to rigorously test the efficacy of the toolkit in improving teacher self-efficacy and practices for fraction computation and rate and ratio instruction as well as student learning outcomes in grade 6 math. The evaluation will be implemented as a field trial in 2024/25. Schools who sign up for participation are vetted for eligibility. Eligible schools are randomly selected for participation and randomly assigned to treatment or comparison groups. Schools assigned to the treatment group will receive the toolkit in 2024/25 and schools assigned to the comparison group will receive the toolkit in 2025/26 (that is, delayed treatment). This approach allows us to build rigorous evidence on the impacts of the project while also ultimately delivering the toolkit to all participating schools.

Schools are eligible to participate in the evaluation if they

- serve students in grade 6,
- are willing to participate in the evaluation with delayed implementation if assigned to comparison group, and
- are not already providing PD in grade 6 math instruction that is of the same type and level of intensity as that is being provided by the toolkit.

### **Data collection for ALL schools**

- Student extant data (student demographic and assessment scores from 2023/24 for all grade 6 students)
- Teacher extant data (demographic and background for grade 6 math teachers)
- Teachers pre- and post-surveys (grade 6 math teachers)
- A short student assessment of fraction, rates and ration problems (grade 6 students)
- Classroom observations (once in spring 2025)
- Interviews with selected teachers and school leaders (**treatment only**)
- **Your responses are under the confidentiality and data protection requirements of the Institute of Education Sciences (The Education Sciences Reform Act of 2002, Title I, Part E, Section 183)**

### **Important notice**

While individual, school, and district project participation and data submission are strictly voluntary and participants may withdraw from the project at any time, attrition could negatively affect the impact results of the study. Therefore, we strongly encourage involvement of all stakeholders including principals and grade 6 math teachers to make an informed decision before submitting an agreement to participate.

### **More information**

Feel free to contact Project Principal Investigator Yinmei Wan (630-649-6554, [ywan@air.org](mailto:ywan@air.org)) with any questions you might have. The project team is also available to set up an online conference with any of your stakeholders to describe the project and answer questions.

## Appendix A2 – Teaching Fractions Toolkit Evaluation District/School Eligibility Questionnaire

Please complete the questions below in order to help us determine your eligibility for participation in the evaluation of the Teaching Fractions Toolkit (TFT).

### *Section 1: District information*

Official district name

Name of person completing form

Email address of person completing form

Phone number of person completing form:

### *Section 2: School information (repeat this section for each school)*

Name of school building eligible to participate. Schools must serve grade 6 students.

Total number of 6th grade teachers who teach at least one regular math class

The school is not currently participating and will not participate during the study years (Fall 2024 - Spring 2025) in a program similar to TFT (see the project overview).

- True
- False

The school is willing to wait one year for TFT program implementation in the event the school is randomly selected to the comparison group. The school is willing to participate in all data collection during the one-year waiting period.

- True
- False

The school is willing to assign a data point of contact to provide student and teacher data and engage in all data collection activities (student and teacher administrative and assessment data, teacher survey, classroom observations, and a short student assessment; See the project overview).

- True
- False

Please provide any additional information you feel clarifies the questions above.

*Section 3: Follow-up*

What questions do you have about the project and what would be required to participate?

## Appendix A3 – Informed Consent for Teachers to Participate in the Teaching Fractions Toolkit Evaluation Project

Funded by the U.S. Department of Education’s Institute of Education Science, Regional Educational Laboratory (REL) Midwest is developing a toolkit with resources that supports the implementation of effective grade 6 fractions instruction based on the evidence-based recommendations in the [Developing Effective Fractions Instruction for Kindergarten Through 8th Grade practice guide](#). REL Midwest is conducting an evaluation to examine the implementation and impact of the toolkit on teacher and student outcomes. The data collection for the evaluation focuses on grade 6 math teachers and grade 6 students. It begins in August 2024 and ends in summer 2025. As a grade 6 math teacher, you are being asked to provide insight into the implementation and effectiveness of the toolkit by participating in the following **data collection activities conducted by REL Midwest**:

**Online teacher surveys: a baseline survey in August 2024 and a survey in spring 2025.** The surveys will be used to collect data on teacher attitudes, knowledge and practice, and perceptions about the toolkit resources. *Each survey will take approximately 20-30 minutes to complete. They can be done on your own time or during normal contract hours if allowed by your school district.*

**Classroom observations: once in spring 2025.** Observers will be in your classroom during one of your class sessions and collect data on classroom instructional styles by teachers.

**Scheduling your grade 6 students to take a short online assessment of students’ ability to solve fraction, rate and ratio problems in spring 2025.** In collaboration with your school’s “data point of contact” for the evaluation study, you will schedule a time when your students can take the assessment during the school day. *The assessment will take approximately 30 minutes for students to complete.*

**Interviews.** A small number of teachers will be selected to participate in a 45-minute virtual interview with the evaluation team in spring 2025.

**Compensation.** REL Midwest will offer teachers \$30 for completing each data collection activity (the teacher survey, observation, student assessment, interview).

**Risks.** There are no risks associated with this study. Your participation in the study is voluntary. You can decide not to participate or to discontinue your participation at any time without penalty.

**Confidentiality.** All information obtained in this evaluation falls under the confidentiality and data protection requirements of the Institute of Education Sciences (The Education Sciences Reform Act of 2002, Title I, Part E, Section 183). Only the evaluation team members with training in how to deal with sensitive and confidential data will be allowed access. You will not be identified by name nor will the data be presented in a manner that will allow for the identification of any participating individuals.

**Questions?** If you have any questions or concerns about participation in the data collection activities for the research study, please contact Project Principal Investigator, Yinmei Wan, at [ywan@air.org](mailto:ywan@air.org) or (630) 649-6554. If you have concerns or questions about your rights as a research participant, contact AIR’s Institutional Review Board (which is responsible for the protection of project participants) at [IRB@air.org](mailto:IRB@air.org), toll free at 1-800-634-0797, or c/o IRB, 1400 Crystal Drive, 10th Floor, Arlington, VA 22202.

*Statement of consent:*

**You are being asked to participate in the data collection for the evaluation of the Teaching Fractions Toolkit. Involvement entails participating in the data collection activities described above. Please check one of the boxes below:**

- YES, I have read and understand the above and give my consent to participate in the data collection activities for the Teaching Fractions Toolkit Evaluation Project.
- NO, I have read and understand the above, *but I do not give my consent* to participate in the data collection activities for the Teaching Fractions Toolkit Evaluation Project.

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**Your Name (Please Print)**

**Your Signature**

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**Date**

## Appendix A4 – Teaching Fractions Toolkit Evaluation Project Information Sheet for Teachers

Funded by the U.S. Department of Education’s Institute of Education Science, Regional Educational Laboratory (REL) Midwest is developing with resources that supports the implementation of effective grade 6 fractions instruction based on the evidence-based recommendations in the [Developing Effective Fractions Instruction for Kindergarten through 8th Grade practice guide](#). Your school is participating in a research study evaluating the implementation and impact of the toolkit. The evaluation focuses on grade 6 math teachers and grade 6 students. It begins in August 2024 and ends in summer 2025.

### Practice guides

The U.S. Department of Education has supported the development of [several practice guides](#) on different topics. Each practice guide was developed by a team of content experts and researchers who reviewed the available evidence and research studies, and each practice guide shares evidence-based recommendations related to the topic of that practice guide. The Teaching Fractions Toolkit will focus on the [Developing Effective Fractions Instruction for Kindergarten through 8th Grade practice guide](#).

### Teaching Fractions Toolkit

The toolkit includes resources for grade 6 math teachers to support their understanding and implementation of best practices in fraction instruction, including:

- Six teacher professional development (PD) modules: Six hours of synchronous and asynchronous activities per module including exploration of math tasks, student work analysis, lesson planning, use of formative assessment probes, and reflection on classroom practice.
- Diagnostic and monitoring resources for teachers such as a lesson reflection tool for use in planning lessons and reflecting on lessons and formative assessment probes for use with students.

The toolkit also includes resources for administrators and math leaders to understand all five recommendations from the practice guide and how to support teachers to implement those recommendations. Resources will include informational videos, infographics, checklists, and materials to support the facilitation of teacher PD modules.

### Evaluation overview

REL Midwest is conducting an evaluation to rigorously test the efficacy of the toolkit in improving teacher self-efficacy and practices for fraction computation and rate and ratio instruction as well as student learning outcomes in grade 6 math. The evaluation will be implemented as a field trial in 2024/25. Schools who sign up for participation are vetted for eligibility. Eligible districts are randomly selected for participation in the study; and schools in selected districts are randomly assigned to treatment or comparison groups. Schools assigned to the treatment group will receive the toolkit in 2024/25 and schools assigned to the comparison group will receive the toolkit in 2025/26 (that is, delayed treatment). This approach allows us to build rigorous evidence on the impacts of the project while also ultimately delivering the toolkit to all participating schools.



## Data collection activities

As a grade 6 math teacher, you are being asked to provide insight into the implementation and effectiveness of the toolkit by participating in the following data collection activities conducted by REL Midwest:

- Online teacher surveys: a baseline survey in August 2024 and a survey in spring 2025. The surveys will be used to collect data on teacher attitudes, knowledge and practice, and instructional content being taught in the classroom. Each survey will take approximately 20-30 minutes to complete on your own time or on time allowed by your school district during normal contract hours.
- Classroom observations: once in spring 2025. Observers will be in your classroom during one of your class sessions and collect data on classroom instructional styles by teachers and students.
- Scheduling your grade 6 students to take a short online assessment on fractions, rates and ratio problems in spring 2025. In collaboration with your school's "data point of contact" for the evaluation study, you will schedule a time when your students can take the assessment during the school day. The assessment will take approximately 30 minutes for students to complete.
- Interviews: A small number of teachers will be selected to participate in a 45-minute virtual interview with the evaluation team in spring 2025.

## Compensation

REL Midwest will offer teachers \$30 for completing each data collection activity (the teacher survey, observation, student assessment, interview).

## More information

Feel free to contact your principal if you have any questions about this project. You can also contact Project Principal Investigator Yinmei Wan (630-649-6554, [ywan@air.org](mailto:ywan@air.org)) with any questions.